

On Some Properties of the Complex Acids Produced From Rare SOV/18-3-11-13/23
Earths With Ethylene Diamine-Tetraacetic Acid

of the complexes is as well possible by means of the acidification of the complex salts of the type $\text{Me}^I[\text{LnV}]$ or $\text{Ln}[\text{LnV}]_3$. The yttrium oxides form as well H_4Y complex compounds with different water content. Anhydrous compounds could not be produced in the case of yttrium oxides. The solubility of the complex acids of La, Pr, Nd and Sm with H_4V at 25°C is given in table 2. On the strength of the solubility difference between yttrium oxides and cerium earths a fractional separation via the anhydrous acids is suggested. There are 4 tables and 12 references, 0 of which is Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
Kafedra neorganicheskoy khimii (Moscow State University
imeni M. V. Lomonosov, Chair of Inorganic Chemistry)

SUBMITTED: September 7, 1957
Card 2/2

AUTHORS: Mitrofanova, N. D., Martynenko, L. I., SOV/78-3-11-13/23
Yeremin, G. K.

TITLE: On Some Properties of the Complex Acids Produced From Rare
Earths With Ethylene Diamine-Tetraacetic Acid (O neko-
torykh svoystvakh komplekanykh kislot, obrazovannykh
redkozemel'nymi elementami i etilendiamintetrauksusnoy
kislotoy)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 11, pp 2496-2505

ABSTRACT: The complex compounds of the rare earths (Ln) and ethylene (USSR)
diamino-tetraacetic acid (H_4Y) were investigated. The
composition and the solubility of these complex compounds
were determined. Equivalent quantities of aqueous
suspensions of H_4Y were transformed with aqueous suspensions
of the oxides of rare earths at room temperature. A pre-
cipitate of compounds of the following composition is
produced: $H[LaV] \cdot 6 H_2O$, $H[NdV] \cdot 6 H_2O$, $H[SmV] \cdot 6 H_2O$.
At low temperature the cerium earths form complex compounds
with crystal water of integral molar number. Anhydrous
modifications of the complex acids with low solubility
are produced from the boiling solutions. The formation

Card 1, 2

KUMENOVA, A.V.; MITROFANOVA, M.P.

Dry meadows of the Ob'Valley. Trudy INCB no.6:285-303 '83.
(NIR 17:7)

MITROFANOVA, Mariya Matveyevna; SHEKHTER, D.I., red.; POD"YEL'SKAYA,
K.M., tekhn. red.

[Home economics instructions for students] Shkol'nikam o domo-
vodstve. Petrozavodsk, Gosizdat Karel'skoi ASSR, 1962. 158 p.
(MIRA 15:8)

(Home economics--Study and teaching)

YELIOKUMSON, B.I.; MITROPANOVA, M.A.; GAVRILYUK, A.N.; BALTAKSA, M.G.;
LITVINENKO, ~~REDACTED~~, K.D.

New and useful book for industrial transport workers
("Organisation of railroad transportation in metallurgical
plants" by A.K.Averbukh. Reviewed by B.I.Yeliokumson and
others). Metallurg 5 no.6:33 Je '60. (MIRA 13:8)

1. Zavod im. Dzerzhinskogo.
(Railroads, Industrial)
(Averbukh, A.K.)

GLUSHKO, M.Ye., inzh.; KOCHNERGIN, V.M., inzh.; MITROPANOVA, M.A., inzh.

Experience in using specialized cars for intrafactory traffic at
the Dzerzhinskii Works. Bul. TSNII GIM no.3:46-50 '58. (MIRA 11:5)
(Railroads, Industrial--Freight cars)

L 00747-66

ACCESSION NR: AP5020964

the mechanism of energy dissipation from polyisobutylene to nitrous oxide, proposed by J. Okada (J. Appl. Polymer Sci. 7, 1731, 1963), obtains for the other polyolefins. Orig. art. has: 4 figures

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-chemical Institute) Nauchno-issledovatel'skiy institut kabel'noy promyshlennosti (Scientific Research Institute of the Cable Industry)

SUBMITTED: 22Aug64

ENCL: 00

SUB CODE: GC, NP

NR REF SOV: 006

OTHER: 000

Card 2/2

L 00147-36 RPT(a)/BWT(m)/BWP(j)/T/ENA(h)/ENA(1) RPL RM/WW

ACCESSION NR: AP5020964

UR/0190/85/007/008/1319/1322

AUTHOR: Karpov, V. L. ; Leshchenko, S. S. ; Mitrofanova, L. V. ; Finkel', E. E.

TITLE: Characteristics of the radiation crosslinkage of certain polyolefins and their copolymers in a nitrous oxide medium

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 8, 1965, 1319-1322

TOPIC TAGS: polyolefin, polyethylene, polypropylene, copolymer, nitrogen compound, crosslink, radiation effect

ABSTRACT: The effect of nitrous oxide on the radiation crosslinkage of polyethylene, polypropylene and an ethylene-propylene copolymer was investigated by the extraction method. It was shown that nitrous oxide accelerates this process in comparison to radiation crosslinkage attained in vacuum. The greatest acceleration was noted in polypropylene, from which it was concluded that the increased radiation crosslinkage yield is associated with the suppression of degradation. The acceleration effect in polyethylene was smaller since the prevailing process, upon its irradiation, is crosslinking and not degradation. It was suggested that

Card 1/2

L 2265-06
ACCESSION NR: AP5022220

3
their content is 10 to 20 times the amount introduced into polyolefins to protect the latter from oxidation during processing. The most effective antiradiation additives kept the elongation of polyethylene irradiated with Co⁶⁰ gamma rays at 300-350%. Infrared analysis showed that during irradiation, particularly in the course of thermal aging, the stabilizer concentration in polyethylene decreases markedly. It is found that irradiation not only causes the formation of trans-vinylene unsaturation, but also gives rise to systems of conjugated double bonds whose number increases substantially during thermal aging. Carbonyl groups are formed both during irradiation and thermal aging, but in much smaller quantities than in cable polyethylene. "The authors thank G. Ya. Richmond for supplying the antioxidant samples." Orig. art. has: 7 figures. 4455

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MT, GC

NO REF SOV: 005

OTHER: 005

Card

2/2

1.2265-66 INT(1)/EPF(1)/EPF(1)-2/EMP(1)/EWA(1)/EWA(1) 36/EM
 ACCESSION NR: AP002220
 UR/0191/65/000/009/0008/0012
 678.742.2.01:539, 12.04:678.048

AUTHOR: Gladkova, G. I.; Yagorova, Z. S.; Karpov, V. L.; Leshchenko, S. S.;
 Mitrofanova, L. V.; Slovokhotova, M. A.; Finkel', N. E.; Chernyshev, S. M.

TITLE: Thermal stabilization of irradiated polyethylenes by industrial anti-oxidants

SOURCE: Plasticheskiye massy, no. 9, 1965, 8-12

TOPIC TAGS: antioxidant additive, polyethylene, antirad additive, gamma radiation, radiation effect

ABSTRACT: The following industrial antioxidants were introduced into polyethylene in amounts of 2, 5, and 10%: 2,2'-methylenebis(4-methyl-6-tert-butylphenol); 4,4'-methylenebis(2-methyl-6-tert-butylphenol); 2,2'-methylenebis(4-ethyl-6-tert-butylphenol); N-isopropyl-N'-phenyl-p-phenylenediamine (nonox ZA); 4,4'-thiobis(6-tert-butyl-m-cresol); 4,4'-thiobis(2-tert-butyl-m-cresol); phosphite of P-24 (P-24 being a phenol-styrene condensation product); and di- β -naphthyl-p-phenylene-diamine. The polyethylene samples were then irradiated, kept in air thermostated at 150 and 200C for various periods of time, and tested for relative elongation and tensile strength. The compounds were found to have a stabilizing effect if

Card 1/2

L 64695-65

ACCESSION NR: AR5012288

lative effect of tin dibutyl maleate as an additive to polyethylene during thermal aging and irradiation in air.

SUB CODE: GC, MT

ENCL: 00

dm
Card 2/2

L 64695-65 ENT(m)/EPF(c)/EPF(n)-2/EMP(j)/EMA(h)/EMA(1) 00/RM

ACCESSION NR: AR5012288

UR/0058/65/000/003/0035/D075

SOURCE: Ref. zh. Fizika, Abs. 3D607

AUTHOR: Yegorova, Z. S.; Slovokhotova, N. A.; Leshchenko, S. S.; Karpov, V. L.;
Finkel', E. E.; Mitrofanova, L. V.

TITLE: Spectral investigation of changes caused by ionizing radiation in polyethylene stabilized by tin dibutyl maleate

CITED SOURCE: Tr. Komis. po spektroskopii. AN SSSR, vyp. 1, 1964, 503-510

TOPIC TAGS: polyethylene, antioxidant additive, spectrographic analysis, ionizing irradiation, ir spectrum

TRANSLATION: It is found that the addition of tin dibutyl maleate reduces the oxidation rate of polyethylene during thermal aging and when it is subjected to ionizing radiation in air. A shift in the carboxyl ion band in the infrared spectrum from 1615 cm^{-1} for untreated polyethylene with tin dibutyl maleate to 1595 cm^{-1} after irradiation in a vacuum indicates that the polymer radical is joined to the tin atom to form a trialkyl tin salt. This is used as a basis to explain the antioxi-

Card 1/2

The effect of various ...

S/844/52/000/000/094/129
D204/D307

who supplied the organotin compounds, is acknowledged. There are
3 figures and 2 tables.

ASSOCIATION: Fiziko-khimicheskiy institut L. Ya. Karpova; NII ka-
bel'noy promyshlennosti (Physico-Chemical Institute
im. L. Ya. Karpov; NII of the Cable Industry)

Card 3/3

The effect of various

S/844/62/000/000/094/129
D204/D307

irradiated in air and vacuum (~100 Mrad, at 0.6 - 0.8 Mrad/hr), and their thermomechanical properties were studied at 150, 200 or 300°C. Channel and 'Vulcan' soots, the phenol-styrene copolymers $\text{NH}_2\text{C}_6\text{H}_4\text{-N}(\text{C}_6\text{H}_5)_2$, and silica gel 'Aerosol' exerted no stabilizing action on PE; additives containing aromatic groups exerted a pronounced anti-radiation action; additions of silica gel type 'A' (SiO_2 containing uni- and polyvalent metallic admixtures) and of the organotin compounds exerted a strong stabilizing effect. The specimens containing 10 parts by weight of the above stabilizers had their useful life prolonged from 6 to 60 hours at 200°C and from 200 to 1500 hrs at 150°C. The effects of stabilizers depended on their content, the medium (air or vacuum) and temperature. Additives containing aromatic groups thus prevent cross-linking on irradiation but do not inhibit oxidative ageing processes, and vice versa. Organotin derivatives may participate in reactions proceeding through hydroperoxide radicals and leading to the formation of a network with oxygen bridges. The assistance of N. I. Sheverdina and L. V. Abramova,

Card 2/3

S/844/62/000/000/094/129
D204/D307

AUTHORS: Karpov, V. L., Leshchenko, S. S., Mitrofanova, L. V. and Finkel', E. E.

TITLE: The effect of various additives on radiational cross-linking and thermal stability of irradiated polyethylene (PE)

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 547-553

TEXT: The aim of this work was to find suitable stabilizers for irradiated PE and thus increase its useful life at higher temperatures. The additives, i.e. soots and silica gels, a copolymer of phenol and styrene, $H_2N.C_6H_4.N(C_6H_5)_2$, dinaphthylmethane, dibutyl Sn maleate, dibutyl Sn stercate, dibutyl maleate, β -naphthol, and phenyl- α -naphthylamine were mixed into PE by rolling and hot-pressing, in amounts of 1 - 15 parts by weight. The specimens were

Card 1/3

Increase of the thermal stability ...

3312h

S/638/61/001/000/055/056
B125/B104

ASSOCIATION: Gosudarstvennyy n.-i. institut kabel'noy promyshlennosti
(State Scientific Research Institute of Cable Industry).
N.-i. fiziko-khimicheskiy institut im. L. Ya. Karpova
(Scientific Physicochemical Research Institute imeni L. Ya.
Karpov). Vsesoyuznyy elektrotekhnicheskiy institut im.
V. I. Lenina (All-Union Electrotechnical Institute imeni
V. I. Lenin)

Table 1. Tensile strengths of insulations irradiated with fast electrodes.
Legend: (1) irradiation technique; (2) nonirradiated material; (3) voltage;
(4) exposure (min); (5) tensile strength, kg/cm²; (6) relative elongation,
%.

Режим облучения (1)	Необлученный материал (2)	Напряжение (3)									
		0,6 Мв					1 Мв				
		экспозиция, мин. (4)									
		1	2	4	8	16	0,5	1	2	4	
(5) Сопротивление разрыву, кг/см ²	160	148	134	131	158	154	166	159	143	131	
(6) Относительное удлинение, %	480	452	221	144	106	38	461	357	266	165	

Card 4/4

Increase of the thermal stability ...

33124

S/638/61/001/000/055/056
B125/B104

the operating time at normal temperatures. Gamma irradiation in vacuo increases the stability at 20° and 90°C, while doses of more than 200 Mrad reduce it. The irradiation of 0.4 mm thick samples in the air reduces the relative elongation and also the tensile strength at 20° and 90°. The best strength properties are achieved by irradiation in vacuo with doses of up to 100 Mrad. The tensile strength of an insulation irradiated with fast electrons are presented in Table 1. Tensile strength, resistance to frost, electric breakdown and electrical resistance of a sample irradiated with a gamma dose of 100 Mrad or, equivalently, with 1-Mv electrons for 2-4 min were fully satisfactory. The resistance of line insulation to thermal aging drops with increasing radiation dose. Samples irradiated with electrons are more resistant in this respect than samples irradiated with an equivalent gamma dose. There are 6 figures, 6 tables, and 7 references: 5 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: Dolle M., Kelling C. D., Rose D. J. J. Am. Chem. Soc., 76, 4304, 1954; Charlesby A., Bain, T. Brit. Plastics, 30, 4, 146, 1957.

Card 3/4

331.24

S/638/61/001/000/055/056
B125/B104

Increase of the thermal stability ...

the time dependence of deformation (likewise measurable by the above-mentioned device) at constant temperature and load. At increased temperatures the deformation is the lower, the higher the radiation dose, and remains practically constant up to 250°C. The restriction of deformation under a load of 0.5 kg to about half the radial thickness by irradiation with doses of 100-150 Mrad or by irradiation with 1-Mev ($15 \mu\text{a}/\text{cm}^2$) electrons for 2-4 min guarantees the usability of lines above 80°C. The final deformation is increased by a load increase without any change of its nature. The line still remains efficient if the load is quadrupled. The amount of final deformation is not affected by the rate of temperature increase over a wide range. The deformation is only little temperature-dependent under both long and brief load action. A line with irradiated insulation can be exposed to 180°C for at least 4 hrs, and remains efficient for some hours even at 230-250°C. If suitable stabilizers are introduced into polyethylene, the maximum operating time in this temperature range can probably be increased considerably, and the line can be exposed to even higher temperatures for a short time. The increased thermal stability improves the reliability of insulated wires at high temperatures, especially in the case of breakdown, and increases

Card 2/4

15.8520

9,2165 (1001, 1331, 1482)

33124

S/638/61/001/000/055/056
B125/B104

AUTHORS: Karpov, V. L., Malinskiy, Yu. M., Mitrofanova, L. V.,
Slinitsyn, S. T., Finkel', E. E., Fridman, A. S. Chernetsov,
S. M.

TITLE: Increase of the thermal stability of polyethylen-insulated
lines by ionizing radiation

SOURCE: Tashkentskaya konferentsiya po mirnomy ispol'zovaniyu
atomnoy energii. Tashkent, 1959. Trudy. v. 1. Tashkent,
1961, 383-389

TEXT: A copper wire 1 mm in diameter and insulated with 0.5 mm of
polyethylene was irradiated by a Co⁶⁰ gamma radiation source of
20,000 g-equ. Ra in a vacuum as well as by an electron linear accelerator
in the air. The thermal stability of the irradiated samples was deter-
mined by the analysis of the thermomechanical curves, i.e., of the time
dependence of deformation under given load and with the temperature rising
by a constant rate of 50 deg/hr, using a specially built device. The
deformation that was attained is a measure of thermal stability at given
temperature and load. The lifetime of the workpiece can be estimated from
Card 1/4

Device for Determination of the Thermal Stability of Polyethylene- or Rubber Cable Insulations S/C32/60/026/01/034/052
B010/B006

are given (Fig 2). The relative measuring error of this device is $\pm 5\%$ at the maximum. There are 2 figures. (1)

Card 2/2

28 (5)

AUTHORS:

Karpov, V. L., Malinskiy, Yu. M., S/032/60/026/01/034/052
Mitrofanova, L. V., Finkel', E. E., B010/B006
Fridman, A. S.

TITLE:

Device for Determination of the Thermal Stability¹² of Poly-
 ethylene- or Rubber Cable Insulations¹³

PERIODICAL:

Zavodskaya laboratoriya, 1960, Vol 26, Nr 1, pp 102 - 103 (USSR)

ABSTRACT:

The device mentioned in the title (Fig 1) consists essentially of an H-shaped frame standing on a steel plate. The latter has an opening in the middle of the crossbeam, through which the post with the loading weights is guided. At its top end, the post is fitted with a plate which transmits the pressure to the sample by means of two inset rodlets. The sample (a piece of cable with the insulation to be tested) is supported by two rodlets also. To indicate subsidence (sample deformation) of the last-mentioned plate by the indicator, the indicator is placed on the plate. Except for the indicator, the device is put in a thermostat, rendering possible sample heating at various rates up to 230°C. The thermomechanical curves obtained for samples of high- and low-pressure polyethylene¹⁵ by means of the device described above

Card 1/2

Increase in the Thermostability of the Polyethylene
 Insulation of Cables by Means of Exposure to Ionizing Radiation

06210

SOV/64-59-6-2/28

a definite load and a constant rate of temperature increase (50°C/h). The thermodynamic curves obtained (Figs 2-10), the tensile-strength coefficients (Table 1), and the data of electric resistance (Table) as well as data concerning the thermal aging of the irradiated samples permit the following statements: an irradiation of either of the two above-mentioned kinds permits an increase in the temperatures to which polyethylene insulations may be exposed. The optimum mechanical properties of the insulation were reached in the case of γ -irradiation in a vacuum with doses up to 100-150 Mrad and in the case of electrons in air during 2-4 minutes at a tension of 1 mgv or during 8 minutes at 0.6 mgv and a current density of approximately $15\mu\text{A/cm}^2$. The cables irradiated with the optimum dose operate without failure for some hours at temperatures up to $230-250^{\circ}$, some ten hours at 130° , and several hundred hours at 110° . The use of corresponding stabilizers may essentially lengthen the life of irradiated polyethylene insulation and increase the maximum working temperature. There are 10 figures, 3 tables, and 11 references, 7 of which are Soviet.

Card 2/2

25(5)
AUTHORS:

06210
SOV/64-59-6-2/28
Karpov, V. L., Malinskiy, Yu. M., Mitrofanova, L. V., Sinitsyn, S. T., Finkel', E. E., Fridman, A. S., Cherntsov, S. M.

TITLE:

Increase in the Thermostability of the Polyethylene Insulation of Cables by Means of Exposure to Ionizing Radiation

PERIODICAL:

Khimicheskaya promyshlennost', 1959, Nr 6, pp 468 - 474 (USSR)

ABSTRACT:

The thermostability of polyethylene can be increased by the action of ionizing radiations (Ref 1). Polyethylene exposed to a sufficiently large dose of radiation at 110-115° possesses properties similar to those of rubber (Ref 3). An investigation was made of the irradiation conditions and testing methods of cables (1 mm thick copper wire) insulated with polyethylene (type OKhK-501). The insulating material was exposed to γ -rays of Co⁶⁰ (gamma plant "K-20000" (Ref 8)) with a capacity of 0.6-0.9 Mrad/h or to fast electrons from a linear accelerator of 1 Mev. The tensile strength of the exposed samples was tested by means of a dynamometer designed by V. A. Belynskiy, S. D. Prokudin, and B. I. Zverev at the Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-chemical Institute imeni L. Ya. Karpov). The thermostability of the irradiated samples was determined by means of an apparatus (Ref 10). At the same time, the dependence of the deformation on time was investigated at

Card 1/2

DUSHINA, O.P.; MITROFANOVA, L.I.; CHUDENTSOVA, Ye.N.; SAVCHENKO, N.T.

Case of isolation of atypical Brucella from murine rodents in the
Chechen - Ingush Autonomous Republic. Zhur. mikrobiol., epid. i
immun. 41 no.3:143-144 Mr. '64. (MIRA 17:11)

1. Checheno-Ingushskaya respublikanskaya sanitarno-epidemiologicheskaya
stantsiya.

ILLEGIBLE

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134700014-6

DYUBUA, B.Ch.; MITROFANOVA, L.A.; NEVSKAYA, L.V.

Distributive tungsten-barium cathodes. Izv. AN SSSR. Ser. fiz. 28
no.9:1491-1498 S '64. (MIRA 17:10)

MITROFANOVA, L.A.

New astrophysical laboratory at the Pulkovo Observatory. Izv.
GAO 24 no.1:30-37 '64. (MIRA 18:3)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134700014-6



APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134700014-6

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ACCESSION NR: AP4039405

250-350C. The cubic phase was preserved up to 500C, but the amount declined appreciably. Prolonged heating, even at low temperatures (300C), caused disappearance of the cubic phase. Orig. art. has: 4 figures and 1 table.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Institute of Power Engineering)

SUBMITTED: 05Nov63

ENCL: 00

SUB CODE: EC, SS

NO REF SOV: 004

OTHER: 003

Card 2/2

ACCESSION NR: AP4039405

S/0070/64/009/003/0418/0419

AUTHORS: Shalimova, K. V.; Andrushko, A. F.; Dmitriyev, V. A.; Pavlov, L. P.

TITLE: Crystal structure of CdS films deposited on glass and metal backing and further subjected to heat treatment

SOURCE: Kristallografiya, v. 9, no. 3, 1964, 418-419

TOPIC TAGS: sputtered film, metal backing, cadmium sulfide, cubic phase, hexagonal phase, annealing, heat treatment

ABSTRACT: The authors found that layers of CdS sputtered on films of gold exhibit inhomogeneous phases. With backing temperatures of 200-350C, both hexagonal and cubic phases were observed, whereas films deposited on glass showed the two modifications at temperatures only up to 250C. From this it seems obvious that the gold affects the phase composition. These films have mosaic structure of the two phases, with the cubic phase making up as much as 30%. The hexagonal crystals lie with the (0001) face parallel to the backing; the cubic crystals with the (111) face parallel to the backing. Samples heated above 350-400C have the hexagonal phase with no detectable orientation, differing from the relationship on glass backing. For short-period annealing (0.5-1 hr), structural changes occurred only on heating above

Card 1/2

ACCESSION NR: AP4043927

Doppler effect in laboratory conditions at relatively low velocities. The laboratory was destroyed by the Germans in 1941. The facility was rebuilt between 1945-1956. It consists of an upper and lower (underground) parts. The most important equipment are: a vacuum diffraction spectrograph, a spectrograph with an inverted diffraction grate, a KS-55 spectrograph and an optical tunnel. The tunnel is 107 m long, 1.8 m wide and has an average height of 3 meters. The optical tube in the tunnel will be used for the study of contours of spectral lines in the presence of various gases, dispersion and absorption of substances, etc. The interests of physicists and astrophysicists particularly in the field of atomic and molecular spectroscopy coincide more and more frequently. The problems which they face will be solved successfully through cooperation. Orig. art. has: 6 figures.

ASSOCIATION: Glavnaya astronomicheskaya observatoriya AN SSSR (Pulkovo). (Principal astronomical observatory at Pulkovo).

SUBMITTED: 00

ENCL: 00

SUB CODE: AA

NO REF SOV: 000

OTHER: 000

Card 2/2

ACCESSION NR: AP4043927 s/0026/64/000/008/0044/0050

AUTHOR: Mitrofanova, L.A. (Candidate of physico-mathematical sciences)

TITLE: Astronomy and physics in harmony. New astrophysical laboratory in Pulkovo.

SOURCE: Priroda, no. 8, 1964, 44-50

TOPIC TAGS: spectral analysis, helium, ultraviolet radiation, molecular oxygen, nitrogen, water vapor, magnetic field, Doppler effect, vacuum diffraction spectrograph

ABSTRACT: This article is dedicated to the 125th anniversary of the Pulkovo observatory. The author describes the importance of spectral analysis in the investigation of the chemical contents of heavenly bodies. The study of atmospheres of heavenly bodies is hindered strongly by the Earth atmosphere, due to the absorption of ultraviolet radiation. The application of rockets and satellites beyond the Earth's atmosphere make it possible to obtain new physical parameters of the atmospheres of planets and other heavenly bodies. However completely reliable data can be obtained only through the cooperation of physicists and astrophysicists in ground laboratories. One of these is the new astrophysics laboratory in Pulkovo. The first astrophysical laboratory was set up in Pulkovo in 1874. The first astronomer-astrophysicist in charge of the laboratory was B. Gassel'berg. One of the most significant achievements took place in 1898-1901 when A. A. Balopol'skiy succeeded in reproducing the

Card 1/2

MITROPOLNOVA, L.A.; ZHURBOK, L.M., 1964, 1966.

Mounting and testing of a telescope with a large absorption
path for the investigation of molecular spectra. (1964) (1966)
Isir. no.262:8 0165.

1. Glavnaya astronomicheskaya observatoriya AN USSR, Arkhovo.

DERVIZ, T.Ye.; KUPREVICH, N.F.; MITROFANOVA, L.A.

Results of measurements of spectrum line intensities of the sun in
relation to the phase of solar activity. Astron.zhur. 38 no.3:448-
454 My-Je '61. (MIRA 14:6)

1. Glavnaya astronomicheskaya observatoriya AN SSSR.
(Sun) (Spectrum, Solar)

37948

S/035/62/000/005/045/098
A055/A101

3,1520

AUTHOR: Mitrofanova, L. A.

TITLE: On the interdependence of the equivalent latitudes and the depth of Fraunhofer lines

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 5, 1962, 49, abstract 5A372 ("Solnechnyye dannyye", 1960 (1961), no. 11, 73 - 77)

TEXT: The author reproduces a curve and some tables characterizing the interdependence of the equivalent latitudes and the depth of the Fraunhofer solar lines, obtained with the aid of a diffraction spectrograph by the photoelectric method (resolving power 48,000; linear dispersion in the first order 27 Å/mm) in the region $\lambda\lambda 4003 - 4508$. X

O. M.

[Abstracter's note: Complete translation]

Card 1/1

DERVIZ, T.Ie.; KUPREVICH, N.F.; MITROFANOVA, L.A.

Preliminary results of measuring changes in line intensities in
the solar spectrum depending on the period of solar activity.
Astron.tsir. no.213:4-5 J1 '60. (MIRA 14:1)

1. Glavnaya astronomicheskaya observatoriya AN SSSR.
(Spectrum, Solar)

SOV/35-59-10-7879

Translation from: Referativnyy zhurnal. *Astronomiya i Geodeziya*, 1959, Nr 10, p 28
(USSR)

AUTHOR: Mitrofanova, L.A.

TITLE: The Determination of the Relative gf Numbers for ScI and ScII

PERIODICAL: *Izv. Gl. astron. observ. v Pulkove*, 1958, Vol 21, Nr 3, pp 159-161 rés.
Engl.)

ABSTRACT: The relative gf numbers for ScI and ScII were determined by the radiation method. An oxide of Sc_2O_3 was burnt in carbon arc electrodes. A short description of the spectrograph, the nature of the arc's burning and the condenser system in front of the slit is given. There is a fuller description of the photometric method of the processing of negatives. In the 3911-5711 region 6 multiplets were measured, including 17 lines of ScI, and 7 multiplets consisting of 18 ScII lines. The temperature of the arc was determined from iron lines with known gf. The results for ScI and ScII are represented on a common table (but the systems of the gf (ScI) and gf (ScII) numbers are different: they differ by a constant multiplier).

K.I. Nikol'skaya K

Card 1/1

81h40

30N/35-59-B-6211

The Determination of the Relative Numbers fg for Sr I, Sr II

where E_m is the excitation potential of the upper level, const. - is a constant, different for Sr I and Sr II. T was determined from the spectrograms of the arc with the admixture of Fe on the basis of the known values of $g_p f$ for Fe. The obtained $g_p f$ numbers are tabulated.

G.M. Nikol'skiy

Card 2/2

81440

3.1520

30V/35-59-8-6211

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959,
Nr 8, p 17

AUTHOR: Mitrofanova, L.A.

TITLE: The Determination of the Relative Numbers fg for Sr I, Sr II

PERIODICAL: Izv. Gl. asiron. observ. v Pulkove, 1958, Vol 20, Nr 6,
pp 52 - 54 (res. Engl.)

ABSTRACT: The determination of the gf numbers with a KS-55 spectrograph was made from the spectrum of the carbon arc with electrodes filled with $SrCl_2$. The region at around $\lambda \lambda 4,000 - 5,600$ was studied in which were measured 21 lines (7 multiplets) of Sr I and 3 lines (2 multiplets) of Sr II. The gf numbers are connected with the relative intensities of the I lines and the temperature T of the arc by the relationship

$$\lg \frac{I \lambda^3}{g_n f} = \text{const} - \frac{5040}{T} E_m$$

Card 1/2

SOV/35-59-9-7005

On the Calibration of Spectrograms According to the Iron Comparison Spectrum at Medium Dispersions of the Spectrographs

by the laboratory values of the intensities of the lines. For this, Crosswhite's numerous photoelectric measurements were used, providing a large number of lines, which can be used in calibration. The comparative processing of plates which was carried out has shown a better agreement. A table is given which allows the selection of the least number of lines necessary for the even plotting of the characteristic curve for a given spectrograph of medium dispersion. Bibl. 8 titles.

K.I. Nikol'skaya

Card 2/2

SOV/35-59-9-7005

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, Nr 9, p 18 (USSR)

AUTHORS: Mel'nikov, O.A., Mitrofanova, L.A.

TITLE: On the Calibration of Spectrograms According to the Iron Comparison Spectrum at Medium Dispersions of the Spectrographs.

PERIODICAL: Izv. Gl. astron. observ. v Pulkove, 1958, Vol 20, Nr 6, pp 44 - 51
(Engl. résumé)

ABSTRACT: The authors examine the question on the calibration of spectrograms according to the iron comparison spectrum, and in particular, the method suggested by Hogg, of plotting a characteristic curve of the (photo) plate by the relative theoretic intensities of the lines of iron multiplets. For the same (photo) plate the characteristic curves were plotted by three methods: by that of Hogg, by the experimental intensities of iron lines, and with the aid of the marks of a stepped slit. From the correlation of these curves, the authors conclude that Hogg's method is insufficiently accurate. By virtue of the small range of intensities within the multiplets, the characteristic curve is compiled by separate, small sections. A new method is recommended for calibrating the spectrograms.

Card 1/2

MITROPANOVA, L.A.

Calibration of spectrograms by means of iron comparison
spectrum for small-dispersion spectrographs. Astron.zhur.
33 no.5:729-732 S-O '56. (MLRA 9:12)

1. Glavnaya astronomicheskaya observatoriya Akademii nauk SSSR.
(Stars--Spectra) (Spectrograph)

MITROFANOVA, L.A.

Determining the relative "gf" numbers for Titanium I and
Titanium II. Isv.GAO 19 no.6:107-111 '55. (MIRA 13:5)
(Titanium--Spectra) (Spectrum, Solar)

MITROFANOVA, L. A.

"Determination of Relative Numbers g_f of Chrome"
Izv. Gl. Astron. Observ., 19, 5, No.152, 1954, pp 100-102

The product of oscillator force f and static weight g was determined by the radiative method, as previously done by authoress (ibid. No.149, 81 (1953)). An a.c. arc with electrodes of electrolytic chrome was used as excitation source. Results concurring with those obtained by absorption method by A. Hill and R. King (J. Optical Soc. America 41, 319 (1951)) are tabulated. (RZhAstr, No.11, 1954)

SO: W-31167, 8 Mar 55

MITROPOLSKA, L. A.

Determination of Relative Numbers of Fe II. Izv. Glav. astron. observ. v Leninge, *Vestn.*
No 4, 1953, 45-48

The transition probabilities of Fe II were computed in the wave length
350-460 millimicrons for 91 lines. The excitation method of the spectrum by an
electric spark is described. The spark temperature was found from Fe I data
to be $T = 5800 \pm 380^\circ$. (RZhAstr, No 2, 1954)

SO: W-31128, 11 Jan 55

1. MITROPANOVA, L. A.
2. USSR (690)
4. Spectrum, Solar
7. Increase curve of the sun according to laboratory intensities of Fel. Izv. Glav. astron. obs. 19 no. 2 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

MITROFANOVA, Lidiya Aleksandrovna; KHAVKUNOV, P.Ya., red.; LIFEROVA,
A.I., red. izd-va

[Secondary processing of raw hides, sheepskins and garment
sheep pelts in the bases and storages of consumers' co-
operative societies] Doobrabotka kozhevennogo syr'ia, me-
khovoi i shubnoi ovchiny na bazakh i skladakh potrebitel'-
skoi kooperatsii. Moskva, Izd-vo TSentrosoiuza, 1961. 26 p.

(MIRA 15:7)

(Hides and skins)

MITROFANOVA, K.V.

Photogoniometry of three basic types of diamond crystals with
curved grains. Zap.Vses.min.ob-va 85 no.4:563-568 '56.

(MLRA 10:2)

(Diamond crystals) (Goniometry)

MITROFANOVA, K.V.

New data on photogoniometry of diamonds. Zap. Vses. min. ob-va
84 no. 2:220-223 '55. (MLRA 8:10)
(Goniometry) (Diamonds)

MITROFANOVA, K. V.

MITROFANOVA, K. V.: "Photogoniometry of diamonds". Leningrad, 1955. Min Higher Education USSR. Leningrad Order of Lenin and Order of Labor Red Banner Mining Inst. (Dissertations for the Degree of Candidate of Geological-Mineralogical Sciences.)

So: Knizhnaya letopis' No. 49, 3 December 1955. Moscow

GORIN, A.P.; MITROFANOVA, K.S.

Successes of Soviet plant breeding. Biol. v shkole no.4:82-88
Jl-Ag '63. (MIRA 16:9)

1. Moskovskaya sel'skokhozyaystvennaya akademiya imeni
K.A.Timiryazeva. (Plant breeding)

GORIN, A.P., prof.; DUNIN, M.S.; KONOVALOV, Yu.B.; MITROFANOVA,
K.S.; POLITOVA, I.D.; SAMSONOV, M.P.; SELAVRI, M.K.;
UKOLOV, A.A.; YURTSEV, V.N.; GRACHEVA, V.S., red.;
~~POKOTOVA, N.N., red.~~

[Manual on field work in the breeding and seed production
of field crops] Rukovodstvo k prakticheskim zaniatiyam po
selektсии i semenovodstvu polevykh kul'tur. [By] A.P.Gorin
i dr. Moskva, Sel'khozizdat, 1963. 574 p.

(MIRA 16:12)

1. Kollektiv prepodavateley kafedry genetiki, selektсии i
semenovodstva polevykh kul'tur Moskovskoy sel'skokhozyay-
stvennoy akademii im. K.A.Timiryazeva (for Gorin, Konvalov,
Mitrofanova, Samsonov, Selavri, Ukolov, Yurtsev). 2. Kafedra
Fitopatologii Moskovskoy sel'skokhozyaystvennoy akademii im.
K.A.Timiryazeva (for Dunin). 3. Kafedra statistiki Moskovskoy
sel'skokhozyaystvennoy akademii im. K.A.Timiryazeva (for
Politova).

(Field crops) (Seed production)

MITROFANOVA, K. S.

Mitrofanova, K. S. "On the problem of the harvest quality of wheat", Doklady (Mont. s.-kh. akad. in. Tikhonova), Issue 8, 1948, (In index: 1949), p. 40-41.

SO: U-411, 17 July 1952, (Leningrad 'Izvestia' and State, No. 1, 1952).

MITROFANOVA, I. A. and FUCHKOV, N. G.

"Low Temperature Properties and Stability of Paraffinic Avtols", p 76,
in the Monograph "Investigation and Use of Petroleum Products", edited by
N. G. Fuchkov, Gostoptekhzdat, Moscow-Leningrad, 1950.

MITROFANOVA, I. A. and FUKS, G. I.

"Improving the Viscosity and Temperature Properties of Lubricating Oils by Compounding Fractions", p 111, in the Monograph "Investigation and Use of Petroleum Products", edited by N. G. Fuchkov, Gostoptekhnizdat, Moscow-Leningrad, 1950.

CA

New method for determining the viscosity of oils at low temperatures. By A. Pinkewich, U. S. A. *Siderokanov* and I. G. Karava. *Nefteyanaya Prom. U. S. S. R.* 22, No. 3, 113-115 (1941); *Chem. Zvest.* 1942, II, 3448. The method of Ulbschlagel-Hohle is used in the standard method for finding the dynamic viscosity in the U. S. S. R. The method of the dynamic viscosity in the U. S. S. R. The viscometer consists of a U-tube with a capillary in one leg (A) of the U-tube and two bulbs of equal size and located at the same height, one on top of the capillary, the other in the other leg (B) of the U-tube. On top of the bulb in the other leg (B) of the U-tube there are two more bulbs to measure the stream velocity. The lower bulbs are filled with oil to an indicated level and aqueous, colored air, is put on top of the oil in leg (B). The viscometer is submerged up to the measuring bulb in a thermostat. Pressure is put on (A) and the time required to fill the measuring bulb with air is observed. The pressure is then switched to (B) and the time required to empty the bulb of alcohol is measured. The mean value c in seconds, the pressure p in mm. mercury and the constant x of the viscometer (determined by calibration) give the dynamic viscosity η at the temp. t according to $\eta = (\rho \cdot v \cdot c)$. The viscosity of the air can be neglected. H. H.

GOYKO, V., kand. sel'skokhoz. nauk; CHAKINA, Z., nauchnyy sotrudnik;
ISAKOVA, N., kand. biolog. nauk; MAMEDOVA, S., dotsent;
MITROFANOVA, I., nauchnyy sotrudnik; LISYUTINA, E., dotsent

Brief reports. Zashch. rast. ot vred. i bol. 10 no.3:51-52 '65.
(MIRA 19:1)

1. Odesskaya gosudarstvennaya sel'skokhozyaystvennaya opyt'naya
stantsiya (for Goyko, Chakina). 2. Vsesoyuznyy nauchno-issledo-
vatel'skiy institut zashchity rasteniy (for Isakova). 3. Direktor
Azerbaydzhanakogo instituta zashchity rasteniy, Kirovabad (for
Mamedova). 4. Vsesoyuznyy institut tabaka i makhorki, Krasnodar
(for Mitrofanova). 5. Kurskiy sel'skokhozyaystvennyy institut
(for Lisyutina).

BOLGOV, I.F., kand.tekhn.nauk; DONSIKH, I.Ye., inzh.; IVANOV, N.I.,
inzh.; MITROFANOVA, G.V., inzh.

Survey of triangulations used in laying out large hydroelectric
developments. Energ. stroi. no.3:79-83 (13), 1960. (MIRA 14:9)

1. Normativno-issledovatel'skaya stantsiya Instituta "Orgener-
gostroy".

(Hydroelectric power stations) (Surveying)

MITROFANOVA, G.P.

Clinical significance of serum protein fractions and complement
titers in pneumonia in infants under 1 year of age. *Pediatrics*
38 no.11:36-41 N '60. (MIRA 13:12)

1. Iz kafedry gosptital'noy pediatrii II Moskovskogo meditsinskogo
instituta imeni Pirogova (zav. - prof.K.F.Popov) na baze detskoy
klinicheskoy bol'nitsy imeni N.F.Filatova (glavnyy vrach M.N.
Kalugina).

(PNEUMONIA in inf. & child)
(BLOOD PROTEINS)
(COMPLEMENT)

MARTYINKINA-SHITSKOVA, V.V.; MITROFANOVA, G.P.

Alkaptonuria in an eight-year-old child. Vop.okh.mat.i det. 1 no.1:
80-83 Ja-F '56. (MLRA 9:9)

1. Iz kafedry gospiatal'noy pediatrii (zav.-prof. K.F.Popov) II
Moskovskogo meditsinskogo instituta imeni I.V.Stalina na baze
klinicheskoy detskoy bol'nitsy imeni N.F.Pilatova (glavnyy vrach
M.N.Kalugina)

(URINE--ANALYSIS ANDPATHOLOGY)
(HOMOGENITISIC ACID)

BELODVOPSVY Yuliy Maksimovich; BATURIN, T.K., nauchn. red.;
MITROFANOVA, G.M., ved. red.

[Gas leakage, its causes and elimination] Utechki gaza, ikh
prichiny i ustranenie. Leningrad, Nedra, 1965. 149 p.
(MIRA 18:4)

NESTEROV, I.I.; PEROZIO, G.N.; BRADUCHAN, Yu.V.; STAVITSKIY, B.P.; NESTEROVA, Ye.I.; MITROFANOVA, G.M., vedushchiy red.

[Surgut keywell. Tumen' Province.] Surgutskaya opornaya skvazhina (Tiumenskaya oblast'). Leningrad Nedra, 1964. 187 p. (Leningrad. Vsesoiuznyi neftianoi nauchno-issledovatel'skii geologorazvedochnyi institut. Trudy, no.226)

SEDLUKHA, Georgiy Andrianovich; FUDMAN, Osher Moiseyevich; UREVICH,
A.B., nauchn. red.; MITROPANOVA, G.M., ved. red.

[Earthwork during the construction of city gas lines] Zem-
lianye raboty pri stroitel'stve gorodskikh gazoprovodov.
Leningrad, Izd-vo "Nedra," 1964. 137 p. (MIRA 17:7)

SMIRNOV, Vladimir Aleksandrovich; BARMIN, S.F., nauchn. red.;
MITROFANOV, G.M., ved. red.

[Installation, adjustment, operation, and repair of the
equipment of a gas turbine compressor station] Montazh,
naladka, ekspluatatsiia i remont oborudovaniia gazotur-
binnoi kompressornoj stantsii. Leningrad, Izd-vo
"Nedra," 1964. 126 p. (MIRA 17:5)

MITROFANOVA, E.A.; SUBBOTIN, M.F., otv. red.

[Astronomical yearbook of the U.S.S.R. for 1963] Astronomicheskiy ezhegodnik SSSR na 1963 g.; sorok vtoroi god izdaniia. Moskva, Izd-vo Akad. nauk SSSR, 1961. 650 p.
(MIRA 15:2)

1. Direktor Instituta teoreticheskoy astronomii AN SSSR i Chlen-korrespondent AN SSSR (for Subbotin).
(Astronomy--Yearbooks)

2-0

SOV/5461

Astronomical Yearbook (Cont.)

and K. G. Shumikhina; table for determining latitude by the altitude of the Polar Star - K. G. Shumikhina and P. A. Gutkina; preparation of manuscript for publication - V. G. Kudimova; review and edition of "Explanatory Notes", D. K. Kulikov. There are no references.

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Astronomical Yearbook (Cont.)

SOV/5461

E. A. Mitrofanova (in charge), O. M. Gromova, G. A. Mazing, T. I. Mashinskaya, G. M. Poznyak, K. G. Shumikhina, and P. A. Gutkina; heliocentric coordinates of the large planets - O. M. Gromova, A. G. Mal'kova; reduction values (trigonometric system) - E. A. Mitrofanova, and K. G. Shumikhina; mean positions of stars - E. A. Mitrofanova, M. B. Zheleznyak, O. M. Gromova, K. G. Shumikhina, M. A. Fursenko; solar and lunar eclipses - E. A. Mitrofanova, M. A. Fursenko; planetary configurations - E. A. Mitrofanova, O. M. Gromova; ephemerides for physical solar observations - P. A. Gutkina, T. I. Mashinskaya; ephemerides for physical lunar observations - G. A. Mazing, P. A. Gutkina, K. G. Shumikhina; ephemerides of the illumination of the discs of Mercury and Venus - T. I. Mashinskaya, G. M. Poznyak; ephemerides for physical observations of Mars - G. M. Mazing, T. I. Mashinskaya; ephemerides for physical observations of Jupiter - T. I. Mashinskaya, E. A. Mitrofanova; Saturn's rings - G. A. Mazing, T. I. Mashinskaya; sunrise and sunset - A. I. Frolova; rising and setting of the moon - P. A. Gutkina and K. G. Shumikhina; altitudes and azimuths of the Polar Star - A. G. Mal'kova

Card 3/16

Astronomical Yearbook (Cont.)

SCN/5461

information on the Sun, Moon, Earth, and planets, the Yearbook contains the ephemerides of the lunar crater Moesting A, which until 1956 were published by the Berliner Astronomisches Jahrbuch, [Berlin Astronomical Yearbook], and whose regular publication has now been undertaken by the Institute of Theoretical Astronomy of the USSR at the request of the Union's Committee on Ephemerides. The solar, lunar, and planetary coordinates in the Yearbook are based on data supplied by the British Nautical Almanac as stipulated by the Astronomical Union. The material in the Yearbook was compiled and prepared by the following scientists: computation of ephemerides of the lunar crater Moesting A on high-speed computer BEMS at the Vychislitel'nyy tsentr AN SSSR (Computer Center AS USSR) - D. K. Kulikov; reduction of solar and lunar ephemerides - A. G. Mol'kova and G. A. Mazing; computation of nutation on high-speed computer BEMS - D. V. Zagrebin, O. M. Gromova and A. Ya. Faletova; computation of reduction values of visible positions of ten-day and near-polar stars - M. B. Zheleznyak and M. A. Furzenko; preparation of original data on visible positions of ten-day and near-polar stars -

Card-2/16

MITROFANOVA, E. A.

PHASE I BOOK EXPLOITATION

SOV/5461

Akademiya nauk SSSR. Institut teoreticheskoy astronomii.

Astronimicheskii yezhegodnik SSSR na 1962 g. (Astronomical Yearbook of the USSR for 1962) Moscow, Izd-vo Akademii nauk SSSR, 1960. 647 p. Errata slip inserted. 2,000 copies printed.

Sponsoring Agency: Institut teoreticheskoy astronomii Akademii nauk SSSR.

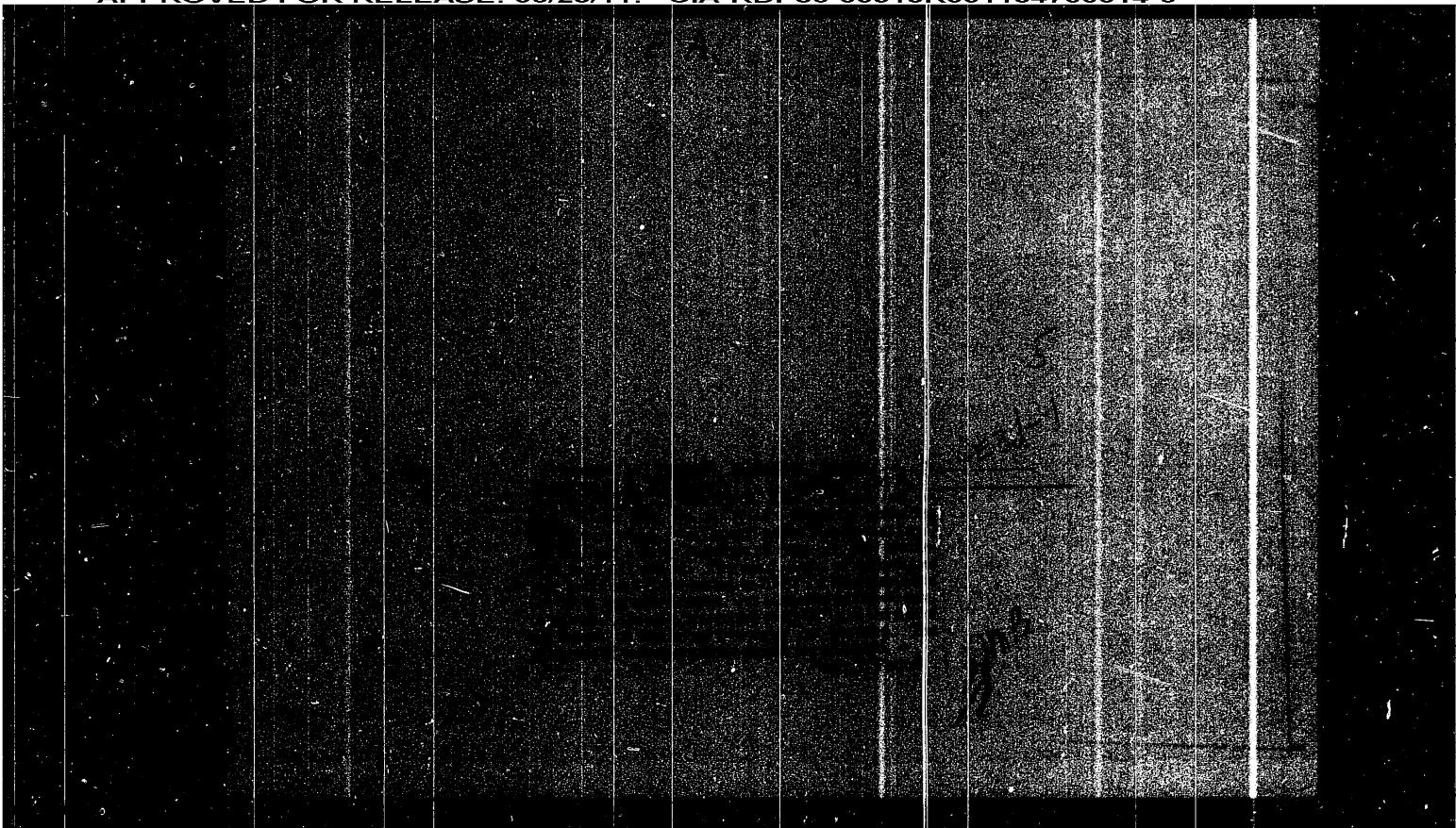
Resp. Ed.: M. F. Subbotin, Director of the Institute of Theoretical Astronomy of the Academy of Sciences USSR, Corresponding Member, Academy of Sciences USSR.

PURPOSE: This book is intended for astronomers and geophysicists.

COVERAGE: The Astronomical Yearbook of the USSR for 1962 has been compiled in accordance with changes proposed by the International Astronomical Union to member organizations at its meeting in 1958. In addition to usual

Card 1/16

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134700014-6



APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134700014-6

ZAGREBIN, D.V.; MITROFANOVA, E.A.; POZNYAK, G.M.

Determining the difference between the ephemeris and universal
standard time by means of observations of lunar occultations of stars.
Biol. Inst. teor. astron. 6 no.1:57-65 '55. (MIRA 13:3)
(Time--Systems and standards) (Occultations)

MITROFANOVA, E. A.

Mitrofanova, E. A., Perlin, F. Kh., Pougak, G. M., Shukova, M. G., Shumilina, K. B.,
Bozhkova, A. I., Gromova, M. B., Zheleznyak, M. B., Kasing, G. A., ~~Nal'kova, A. G.~~,
Mashinskaya, T. I. worked under Zagrebin, D. V. and Kulikov, D. K. ~~on book:~~
YEARBOOK ON ASTRONOMY USSR FOR 1955 (Astronomicheskii ezhegodik US S S na 1955 g.)
by Akademiya Nauk SSSR. Institut Teoreticheskoy Astronomii.

SO: AID Library of Congress (Call No. AF553001)

MITROFANOVA, E. A. and ZHELEZNYAK, M. B.

"Tables for Reducing the Coordinates of the Moon to the Ephemeris Time", Byull. Inst. Teor. Astronomii AN SSSR, No 10, pp 625-681, 1954.

Tables for reducing lunar ephemeris to local time are presented. The obtained corrections facilitate computation of irregularities in the earth's rotation.

SO: Sum. No. 443, 5 Apr 55

MITROPANOVA, E.A.

Comet Neujmin II. Astron. tsir. no. 140:2-3 Ag '53. (MLPA 7:1)

1. Institut teoreticheskoy astronomii Akademii nauk SSSR.
(Comet, Neujmin's II (1916))

1. MITROFANOVA, E. A.
2. USSR (600)
4. Moon - Rotation
7. Amendment of the lunar ephemeris. Izv. Inst. teor. astron. 5, No. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1953, Unclassified.

GAVURINA, R.K.; MITROFANOVA, A.V.; DMITRIYEVA, N.S.

Use of dienyls as accelerators of the "hardening" of process of
unsaturated polyether resins. Zhur. prikl. khim. 31 no.8:1227-1234
Ag '58. (MIRA 11:12)

(Gums and resins)

Engineering Symposium (Cont.)

SOV/4531

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Kerolev, V. I. [Moscow]. Concerning the Calculation of Reinforced Plates and Shells [Received on 1/21/1955]	21
Malkina, R. L. [Sverdlovsk]. Calculation of a Closed Noncircular Cylindrical Shell Under Arbitrary Boundary Conditions [Received on 6/27/1955]	25
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Shkrenev, Yu. S. [Moscow]. Deformation of a Free Cylindrical Shell Under Impact [Received on 5/8/1958]	54

Gari-2/6

MITROFANOVA, A V

PHASE I BOOK EXPLOITATION

SOV/4531

Akademiya nauk SSSR. Institut mekhaniki

Inzhenernyy sbornik, tom 26 (Engineering Symposium, Vol. 26) Moscow, 1958.
286 p. 2,400 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk.
Institut mekhaniki.

Resp. Ed.: A. A. Il'yushin; Ed.: G. I. Pshenichnov; Tech. Ed.: B. M. Lerman.

PURPOSE: This book is intended for engineers.

COVERAGE: The book contains 29 articles dealing with professional work performed by mechanical engineers, such as the calculations of shells, rods, and plates, and solutions of problems in stress distribution and equilibrium. Oscillations (including flutter) and deformation of shells, equilibrium of shell panels, rods and solids, stability of rods, plates, frames and other members, stress concentration, and bending are discussed. Oscillations of aircraft wings are studied. References accompany each article.

-Car 1/6

L 12058-66

ACC NR: AP6001302

samples obtained at 1250 and 1300C) will cause a lower oxidation rate than in samples where the layer orientation is perpendicular to the surface (silicides obtained at 1350C). It is concluded that the oxidation rate of MoSi_2 is affected by many factors, but it has not been possible to determine which is the most important one. Orig. art. has: 2 figures.

SUB CODE: 07, 11 / SUBM DATE: 24May65 / ORIG REF: 006 / OTH REF: 007

OC
Card 2/2

I 12058-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG/WB
 ACC NR: AP6001302 SOURCE CODE: UR/0363/65/001/008/1354/1359

AUTHOR: ⁵⁵Ivanov, V. Ye.; ⁵⁵Nechiporenko, Ye. P.; ⁵⁵Zmiy, V. L.; ⁵⁵Krivoruchko, V. M.;
⁵⁵Verkhorobin, L. F.; ⁵⁵Aleksandrov, O. M.; ⁵⁵Mitrofanov, A. S.; ⁵⁵Poltavtsev, N. S.

ORG: ⁵⁵Physicotechnical Institute, Academy of Sciences UkrSSR (Fiziko-tekhnicheskly
 Institut Akademii nauk UkrSSR)

TITLE: Study of the ⁵⁵oxidation kinetics of ⁵⁵molybdenum ⁵⁵disilicide at 1500 - 1800C

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 8, 1965, 1354-1359

TOPIC TAGS: molybdenum compound, silicide, oxidation kinetics, silicon dioxide

ABSTRACT: Molybdenum disilicide samples (prepared by siliciding molybdenum at 1250, 1300, and 1350C) were oxidized for 10 hr at 1500 and 1600C and for 1 hr at 1700 - 1800C. The oxidation is represented as follows: (1) $5\text{MoSi}_2 + 7\text{O}_2 \rightarrow \text{Mo}_5\text{Si}_3 + 7\text{SiO}_2$, (2) $2\text{MoSi}_2 + 7\text{O}_2 \rightarrow 2\text{MoO}_3 + 4\text{SiO}_2$. X-ray analysis shows that reaction (1) predominates over (2); the latter is of decisive importance at the start, when the SiO_2 film is formed. The increase in the oxidation rate is related to the orientation of the crystals. The structure of MoSi_2 may be considered to consist of layers of silicon and molybdenum atoms alternating in the direction of axis c; if it is kept in mind that the bonding forces between like atoms in a layer are weaker than the forces between the layers, the layer orientation parallel to the surface (MoSi_2

UDC: 646.77'281

Cord 1/2

PLATONOV, P.N.; MITROFANOV, Yu.N.

Investigating the aerodynamics of a layer of grain by the method
of electrical analogies. Izv.vys.ucheb.zav.; pishch.tekh. no.5:
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MITROFANOV, Yu.M., Acad.; RASHKOV, V.S., MSc.

Longitudinal and transverse assembly of predeformed and
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L 07978-67

ACC NR: AP6026419

concrete railroad bridge across the Oka which has parameters very close to those of the two-level bridge across the Volga. The cost of the upper level was 20% of the overall cost for bridge construction (about 70 rubles per square meter of thoroughfare). Orig. art. has: 3 figures.

SUB CODE: 13/ SUBM DATE: None.

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SOURCE CODE: UR/0230/66/000/005/0010/0013

AUTHOR: Mitrofanov, Yu. M. (Chief engineer); Faynshteyn, I. S. (Deputy chief engineer) 8
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ORG: [Mitrofanov] Mostotrest; [Faynshteyn] Giprottransmost

TITLE: A new combined two-level bridge across the Volga at Gorky

SOURCE: Transportnoye stroitel'stvo, no. 5, 1966, 10-13

TOPIC TAGS: highway bridge, railway bridge, civil engineering

ABSTRACT: The authors describe a two-level combined railroad and automobile bridge across the Volga River at Groky. Railroad transportation is on the lower level with automobile traffic on the upper level where the thoroughfare is 7 m wide with sidewalks of 1.5 m each. The bridge is supported by a continuous two-span 2x155 m metal structure and two 55-m span structures. The span structures on the left bank make up an arcade consisting of reinforced concrete arches with a span of 53 m each. The main girders of the metal span structure are 24 m high and located 8.5 m on centers. The overall length of the bridge is 1600 m. The engineering problems involved in construction are discussed in detail and figures are given on the amount of various materials used in making the bridge. A cost analysis shows that this structure is one of the most economic of recent bridges. The cost is below that of the reinforced

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Using rubber washers in the manufacture of built-up beams.
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